PATENT COOPERATION TREATY

PCT

TRANSLATION INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P802633/WO/1	FOR FURTHER ACTION	See Form PCT/IPEA/416						
International application No.	International filing date (day/mo	nth/year) Priority date (day/month/year)						
PCT/EP2004/013013	17.11.2004	09.12.2003						
· · · · · · · · · · · · · · · · · · ·	International Patent Classification (IPC) or national classification and IPC							
B21C37/15, F01N7/08,	B21C37/15, F01N7/08, F16L9/18, B21D9/15							
Applicant								
DAIMLERCHRYSLER AG								
This report is the international preli under Article 35 and transmitted to the		ished by this International Preliminary Examining Authority 5.						
2. This REPORT consists of a total of	8 sl	neets, including this cover sheet.						
3. This report is also accompanied by A	NNEXES, comprising:							
a. (sent to the applicant and	l to the International Bureau) a tota	al of 6 sheets, as follows:						
sheets of the descri	ption, claims and/or drawings whic	ch have been amended and are the basis for this report and/or						
sheets containing re Instructions).	sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).							
		Authority considers contain an amendment that goes beyond						
the disclosure in the Box.	e international application as filed	l, as indicated in item 4 of Box No. I and the Supplemental						
b. (sent to the International	Bureau only) a total of (indicate ty	pe and number of electronic carrier(s))						
related thereto, in compute	r readable form only, as indicated	, containing a sequence listing and/or tables in the Supplemental Box Relating to Sequence Listing (see						
Section 802 of the Adminis	trative Instructions).							
4. This report contains indications relat	ing to the following items:							
Box No. I Basis of the	e report							
Box No. II Priority								
Box No. III Non-establ	ishment of opinion with regard to r	novelty, inventive step and industrial applicability						
Box No. IV Lack of un	ity of invention							
	cuments cited							
Box No. VII Certain def	ects in the international application	1						
Box No. VIII Certain obs	servations on the international apple	ication						
Date of submission of the demand	Date of co	mpletion of this report						
2 and of Sub-Intestrent of the delitated	Bate of co	mpleton of this report						
Name and mailing address of the IPEA/EP	Authorized	dofficer						
Facsimile No.	Telephone	No.						

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/013013

Вох	No. I	Basis o	of the report						
1.		regard to the la	language, this report is based on the international application in the language in vs item.	which it was filed, unless otherwise					
			based on translations from the original language into the following language anguage of a translation furnished for the purposes of:	,					
		internatio	tional search (Rule 12.3 and 23.1(b))						
		publication	tion of the international application (Rule 12.4)						
		internatio	tional preliminary examination (Rule 55.2 and/or 55.3)						
2.	recei		ard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to rt):						
		the internationa	nal application as originally filed/furnished						
	\boxtimes	the description	on:						
		pages 1,2	2,4-16	as originally filed/furnished					
		pages* _3,3	3a received by this Authority on	27.09.2005 with letter of 02.09.2005					
		pages*	received by this Authority on						
	\boxtimes	the claims:							
		nos.		as originally filed/furnished					
			as amended (together	with any statement) under Article 19					
		nos.* 1-15		27.09.2005 with letter					
		nos.*	received by this Authority on						
	\boxtimes	the drawings:							
		sheets 1/	./7-7/7	as originally filed/furnished					
		sheets*	received by this Authority on						
		sheets*	received by this Authority on						
	\Box	a sequence listi	sting and/or any related table(s) – see Supplemental Box Relating to Sequence Li						
3.	$\overline{\Box}$								
3.			ents have resulted in the cancellation of:						
			cription, pages						
			ms, nos.						
			wings, sheets/figs						
			uence listing (specify):						
4.			le(s) related to sequence listing (specify): as been established as if (some of) the amendments annexed to this report and	listed below had not been made since					
4.	Ш		en considered to go beyond the disclosure as filed, as indicated in the Supplement						
		the descr	cription, pages						
		the claim	ms, nos.						
		the drawi	wings, sheets/figs						
		the seque	uence listing (specify):						
		any table	le(s) related to sequence listing (specify):						
*	If ite	m 4 applies, son	ome or all of those sheets may be marked "superseded."						

International application No.
PCT/EP2004/013013

Box			ticle 35(2) with regard to novelty, inventive step or industrial applicability; oporting such statement	
1.	Statement			
	Novelty (N)	Claims	1-15	YES
		Claims		NO
	Inventive step (IS)	Claims	1-15	YES
		Claims		NO
	Industrial applicability (IA)	Claims	1-15	YES
		Claims		NO
2.	Citations and explanations (Rule	e 70.7)		

- The present report makes reference to the following documents:
 - D1: DE 44 37 380 A1 (FA. J. EBERSPAECHER, 73730 ESSLINGEN, DE) 13 July 1995 (1995-07-13)
 - D2: US 3 343 250 A (BERTO CHARLES W ET AL)
 26 September 1967 (1967-09-26).
- 2. INDEPENDENT CLAIM 1

Document D2, considered to be the closest prior art, discloses (the references in parentheses are to said document):

a method for producing a curved, double-skinned component (figure 3), comprising an inner pipe (10) and an outer pipe (16), with an interstitial space (26) between the inner pipe (10) and the outer pipe (16) (figure 1), said method having the following steps:

- supplying the inner pipe (10) and the outer pipe (12);

/...

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

- supplying at least one spacer (12), the thickness thereof approximately corresponding to the space, said spacer being mounted on the inner pipe (10) (column 3, lines 1-4);
- combining the inner pipe and the outer pipe to form a composite structure (column 3, lines 10-12), the spacer (12) filling only part of the interstitial space between the inner pipe (10) and the outer pipe (16) in an axial direction (figures 1 and 2); and
- bending the composite structure formed of the inner and the outer pipes (column 3, lines 13-49).

The subject matter of claim 1 differs from that of D2 in that the spacer is made of a plastics material which, when burnt off, is substantially transformed into only low molecule fission products.

In this way, it is possible for the spacer to be burnt off in a virtually residue—free manner, thereby rendering it possible to incorporate the finished component together with the spacer into the exhaust gas system of an internal combustion engine. When used for the first time, the spacer is burnt off, no damage being caused, for example to catalytic converters, by high—molecular fission products. There remains a double—skinned component with no thermal bridging between the inner and outer pipes.

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Although D1, for example, discloses the use of virtually residue—free plastics materials in exhaust gas systems, so that these can be burnt off the first time the system is used, said document contains nothing to suggest also making the spacers of the same type of material. In D1, a spacer sleeve in a sliding seat is made of a similar plastics material but the spacers between the inner and outer pipes consist of wire mesh, which remains between the pipes and, thus, forms a thermal bridge.

The subject matter of claim 1 is therefore novel and inventive (PCT Article 33(2) and (3)).

3. INDEPENDENT CLAIM 13

Document D2, considered to be the closest prior art discloses (the references in brackets are to said document):

a bent double-skinned component (figure 3), in particular a double-skinned pipe with:

- an inner pipe (10) and an outer pipe (16), an interstitial space (26) being formed between the inner pipe (10) and the outer pipe (16), and
- at least one spacer (12), the thickness thereof approximately corresponding to the space, said spacer being arranged inside the

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

interstitial space and taking up only part of said space between the inner pipe and the outer pipe in the axial direction of the component (see figure 3).

The subject matter of claim 13 differs from that of D2 in that the space is made of a plastics material which, when burnt off, is substantially transformed only into low molecule fission products.

Thus, the problem raised by the method described point 2. above is solved.

The subject matter of claim 13 is, therefore, likewise novel and inventive (PCT Article 33(2) and (3)).

4. DEPENDENT CLAIMS 2-12, 14 AND 15

Claims 2-12, 14 and 15 are dependent claims and, in consequence, also satisfy the requirements of the PCT in respect PCT Article 33(2) and (3).

International application No.
PCT/EP2004/013013

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Independent claims 1 and 13 have not been drafted in the two-part form defined by PCT Rule 6.3(b). However, in the present case the two-part form would appear to be appropriate. Accordingly, the features known in combination from the prior art should have been placed in the preamble (PCT Rule 6.3(b)(i)) and the remaining features specified in the characterising part (PCT Rule 6.3(b)(ii)).

PCT/EP2004/013013

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

The subject matter of claim 2 lacks clarity since said claim relates to a method for the operation of an internal combustion engine, not to a further embodiment of the method according to claim 1. Moreover, it is not evident for what reason the spacers should be burnt off since it is unclear where the component is located within the internal combustion engine. The same objection applies in respect of claim 14.

The analysis is based on the clarified claims 2 and 14, worded as follows:

claim 2: a method according to claim 1, according to which method the spacer supplied is so designed that it is burnt off during operation of an internal combustion engine by the flow of exhaust gas through the inner pipe;

claim 14: a component according to claim 13, in which the spacer is so designed that it is burnt off during operation of an internal combustion engine by the flow of exhaust gas through the inner pipe.